217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
NESHAP SOURCE - RENEWAL

PERMITTEE

Rexnord Industries, Inc.
Attn: Mr. Stephen Faley
Rex Bearing Division
2400 Curtiss Street
Downers Grove, Illinois 60515

Application No.: 73021936 I.D. No.: 043030AAU
Applicant's Designation: Date Received: January 23, 2005
Subject: Bearing Manufacturing Plant
Date Issued: Expiration Date:
Location: 2400 Curtiss Street, Downers Grove

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of boilers, heating/air makeup units, one vapor degreaser, a heat treating operation, plating operation, filament bearing operation and rust preventive coating, solvent cold cleaning operation and magnaflux testing operation pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1a. This federally enforceable state operating permit is issued:

i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for VOM, 10 tons/year for a single HAP, and 25 ton/year for totaled HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.

ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.

b. Prior to initial issuance, a draft of this permit has undergone a public notice and comment period.

c. This permit supersedes all operating permits issued for this location.

2a. The vapor degreaser is subject to 40 CFR part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning. The Illinois EPA is administering this regulation in Illinois on behalf of the United States EPA under a delegation agreement.

b. Pursuant to 40 CFR Part 63.465(b), the Permittee shall on the first operating day of every month ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent and used solvent that has been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

c. Pursuant to 40 CFR Part 63.465(c), the Permittee shall on the first operating day of the month comply with the following requirements:

i. Using the records of all solvents additions and deletions for the previous monthly reporting period, determine solvent emissions (E) using the equation in Condition 2(e).

ii. Determine SSR, using the following method:

A. From test conducted using EPA reference method 25d.

B. By engineering calculations included in the compliance report.

iii. Determine monthly rolling average, EA, for the 3-month period ending with the most recent reporting periods using the following equation:

$$EA_i = \frac{\sum_{j=1}^{3} E_i}{3}$$

Where:

$EA_i$ = The average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods, (pounds of solvent per square feet of solvent/air interface area per month).

j=1 = The most recent monthly reporting period.

j=2 = The monthly reporting period immediately prior to j=1.

j=3 = The monthly reporting period immediately prior to j=2.

d. The emissions and operation of each solvent cleaning machine shall not exceed the following limits, pursuant to 40 CFR Part 63.464(a)(1):

| Solvent-Air Interface | Organic Material Emissions 3-Month Rolling Average Monthly Emissions |
|---|---|

| Type of Machine | Area ($Ft^2$) | (Lbs/Month) | (Tons/Year) |
|---|---|---|---|
| Batch Vapor | 13.1 | 405 | 2.43 |

These limits are based on the type of solvent cleaning machine, solvent-air interface area, and determined by using equation in Condition 2(c)(iii).

e. For determination with the limits of this permit, halogenated solvent usage shall be determined by the following equation, pursuant to 40 CFR Part 63.465(c)(1). E, SA, LSR, SSR, and AREA shall be determined on the first operating day of each month.

$$E = (SA - LSR - SSR) / AREA$$

Where:

E = The total halogenated HAP solvent emissions from the solvent cleaning machine during the current month ($lb/ft^2$).

SA = The total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the current month (lb/month). Solvent addition up to pre marked fill line is required to maintain the same level at the beginning of each month before the calculation.

LSR = The total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the current month (lb/month). Solvent is removed only when it is necessary to remove.

SSR = The total amount of halogenated HAP solvent removed from the solvent cleaning machine solid waste during the current month (lb/month). This shall be determined by engineering calculation or by EPA test method 25D.

AREA = The solvent-air interface area of the solvent cleaning machine ($ft^2$).

3. No person shall cause or allow the emission of carbon monoxide into the atmosphere from each fuel combustion emission unit to exceed 200 ppm in accordance with 35 Ill. Adm. Code 216.121.

4a. The vapor degreaser shall comply with the requirements of 35 Ill. Adm. Code 218.183.

b. The Permittee shall comply with all operating requirements of 35 Ill. Adm. Code 218.182, including not using cold cleaning solvents with a vapor pressure exceeding 1 mmHg at 68°F.

c. The rust preventative coatings is subject to limitations of 35 IAC 218.204(j)(4)(B) for miscellaneous metal parts and products all other baked coating, which provides that:

i. The Permittee shall not apply at any time any coating in which the VOM content exceeds the following emission limitations. The following emission limitation is expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator:

| kg/l | lb/gal |
|---|---|
| 0.34 | 2.8 |

ii. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composites.

d.. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in 35 Ill. Adm. Code 218.302, 218.303, 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart g: Use of Organic Material, shall apply only to photochemically reactive material.

5a. i. Natural gas shall be the only fuel used at the plant.

ii. Emissions and usage of natural gas shall not exceed the following limits:

| Natural Gas Usage | | $NO_x$ | | CO | | PM | | VOM | |
|---|---|---|---|---|---|---|---|---|---|
| (mmscf/Mo) | (mmscf/Yr) | (T/Mo) | (T/Yr) | (T/Mo) | (T/Yr) | (T/Mo) | (T/Yr) | (T/Mo) | (T/Yr) |
| 25 | 250 | 1.3 | 12.5 | 1.1 | 10.5 | 0.1 | 1.0 | 0.07 | 0.7 |

These limits are based on maximum fuel usage and standard AP-42 emission factors..

b. Emissions from filament bearing solvent, solvent cleaning and rust preventive coating shall not exceed the following limits:

i. Filament Bearing Solvent:

| | Usage (Monthly) | Usage (Yearly) | VOM Content | Emissions (lb/Mo) | Emissions (T/Yr) |
|---|---|---|---|---|---|
| Resin | 16,666 lbs | 100,000 lbs | 0.0446 lbs VOC/Lb | 743 | 2.23 |
| Isopropyl Alcohol | 26 Gallons | 160 Gallons | 6.56 lbs VOC/Gal | 170.0 | 0.52 |
| Toluene | 5.0 Gallons | 30 Gallons | 7.25 lbs VOC/Gal | 36.0 | 0.11 |
| Dibasic Ester | 60 Gallons | 360 Gallons | 9.20 lbs VOC/Gal | 552.0 | 1.6 |
| Dow 20 | 10 Gallons | 60 Gallons | 3.98 lbs VOC/Gal | 40.0 | 0.12 |

This limit is based on maximum material usage, maximum VOM content of material and material balance as provided in permit application.

ii. Solvent cleaning, Rust Preventive Coatings and Magnaflux Testing:

A. Combined VOM emissions from rust preventive coatings, cleanup solvents and magnaflux testing solvents shall not exceed 4,233 lbs/month and 11.3 tons/year. These limits are based on actual rust preventive coatings, clean-up and magnaflux testing solvents, usage, waste rust preventive coatings, clean-up solvents and magnaflux testing solvents sent off-site for recycling, and material balance as indicated in permit application.

B. Usage and emissions of condursal thinner shall not exceed 36 lbs/month and 0.11 tons/year.

C. Usage and emissions of methanol shall not exceed 150 lbs/month and 0.45 tons/year.

c. This permit is issued based on negligible emissions of particulate matter from filament bearing operation, heat treating operation and plating operation. For this purpose particulate emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.

d. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a

result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.

e. Compliance with annual limit shall be determined on a monthly basis from the sum of data for current month plus the preceding 11 months.

6a. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

b. The Permittee shall retain the following records on paper or computer disk for five years, pursuant to 40 CFR Part 63.467(c):

i. Record the date and amount of solvent added (SA) to each solvent cleaning machine.

ii. Record the date and amount of halogenated HAP solvent removed (LSR) from each solvent cleaning machine.

iii. The amount of solvent removed (SSR) from the waste of each cleaning machine. Analysis sheet (EPA test method 25D) or calculation shall be retained.

iv. Calculation sheet showing how the monthly emissions and the 3-month rolling average monthly emissions were determined.

v. Emissions of organic material from the vapor degreasing operation (lbs/month).

vi. Emissions of organic material from the vapor degreasing operation (tons/year).

c. Pursuant to 35 IAC 218.211(c)(2), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 and complying by means of 35 Ill. Adm. Code 218.204 shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:

i. The name and identification number of each coating as applied on each coating line; and

ii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.

d. The Permittee shall maintain monthly records of the following items:

i. Natural gas usage ($10^6$ scf/month and $10^6$ scf/year).

ii. Records for the filament bearing operation:

A. Resin usage (lbs/month and lbs/year).

B. VOM and HAP content of resin (lbs VOM/lbs resin).

C. Isopropyl alcohol, toluene, Dow 20, and dibasic ester usage (gallons/month and gallons/year).

D. VOM and HAP content of isopropyl alcohol, toluene, Dow 20, and dibasic ester (lbs VOM/gallon).

E. Monthly and annual VOM and HAP emissions from material usage and VOM content of material with supporting calculations (lbs/month and tons/year).

ii. Records for the rust preventive coatings, clean-up solvents and magnaflux testing solvent:

A. Rust preventive coatings, clean-up solvent and magnaflux solvent usage (gallons/month and gallons/year).

B. VOM and HAP contents of rust preventive coatings, clean-up solvents and magnaflux testing solvents (lbs/gallon).

C. Waste generated for recycling (gallons/month and gallons/year).

D. VOM and HAP content of waste sent offsite for recycling (lbs VOM/gallon) using IEPA Method 24.

E. Monthly and annaul VOM and HAP emissions using material usage, VOM content and solvent generated for recycling with supporting calculations (lbs/month and tons/year).

e. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

7a. The Permittee shall comply with the following reporting requirements pursuant to 40 CFR. Part 63.468.

i. A solvent emission report, pursuant to 40 CFR Part 63.468(g), shall be submitted for each batch vapor or in-line solvent cleaning machine. The solvent emission report shall contain the following:

A. The size (air-interface area or capacity) and type (batch vapor or in-line) for each solvent cleaning machine.

B. The average monthly solvent consumption for the solvent cleaning machine in lb/month.

C. The 3-month rolling average monthly emission estimate calculated for each month.

ii. An exceedance report, pursuant to 40 CFR Part 63.468(h), shall be submitted every 6 months if there is not an exceedance, and every 3 months if there is an exceedance. If an exceedance did not occur the report would consist of a statement certifying that there was no exceedance. The frequency of exceedance report will increase to quarterly after an exceedance occurs. The frequency can be reduced to every six month upon approval from the Illinois EPA provided no exceedance has occurred during the last one year. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. The exceedance report shall include the following:

A. If an exceedance has occurred, the reason for the exceedance.

B. If no exceedance has occurred, such information shall be stated in the report.

iii. The Permittee shall submit exceedance report within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.

b. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.

8. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this permit, please call Dwayne Booker at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:DLB:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the bearing manufacturing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Agency used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels, e.g., (100 tons per year of VOM, 10 tons per year of individual HAP and 25 tons per year for total HAPs) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

| Emission Units | Emissions in (Tons Per Year) | | | |
|---|---|---|---|---|
| | $NO_x$ | CO | PM | VOM |
| Batch Vapor | | | | 2.43 |
| Resin | | | | 2.23 |
| Isopropyl Alcohol | | | | 0.52 |
| Toluene | | | | 0.11 |
| Dibasic Ester | | | | 1.66 |
| Dow 20 | | | | 0.12 |
| Natural Gas Fuel Combustion | 12.50 | 10.50 | 1.00 | 0.70 |
| Totals | 12.50 | 10.50 | 1.00 | 7.77 |

DLB:psj